

Before the Federal Communications Commission

Washington D.C. 20554

In the matter of)	
)	
Amendment of Parts 13 and 80 of the)	WT Docket Nos. 00-48 and 02-102
Commission's Rules Concerning)	
Maritime Communications)	

Comments of

Kurt Anderson

GMDSS Instructor

Submitted 15 August 2002

I actively sailed as a Radio Officer in the U.S. Merchant Marine from 1979-1998; from 1997-1998 serving on an A3 equipped GMDSS vessel whose itinerary covered the Pacific Ocean, the Caribbean Sea and the East Coast of the U.S. I have held a FCC Second Class Radio Telegraph License continuously for 23 years. I also hold a FCC GMDSS Radio Operators/Maintainers License. I have been engaged as a GMDSS Instructor from 1998-2002 and have contributed to the creation of GMDSS STCW curriculum and the STCW GMDSS test pool, which now also comprises FCC Element 7.

General comments:

For all of its technical capabilities, GMDSS is not perceived by many in the Maritime Community as a genuine improvement. The 300 GT carriage requirement has incorporated vastly more vessels, companies and inexperienced crewmembers into the GMDSS system as compared to the prior SOLAS rules.

The benefits of expanded Distress coverage are obvious -- but the very real detriments of the learning curve, equipment expense and crew training remain a significant concern. The latter issue is currently being addressed by STCW classes. However, GMDSS also depends on proper regulation by the national administrations and adequate engineering and software design by the equipment manufacturers to truly function as the designers of the system intended.

The extensive revisions to Part 13 & 80 outlined in 00-48 and 02-102 deal with a wide variety of subjects -- from technical corrections to housekeeping -- rationalizing U.S. rules with ITU/IMO regulations. It is essential that this attempt to improve the law & regulations governing U.S. GMDSS vessels be done so that the end result is clear, comprehensive, explicit, comprehensible and easily extracted. Unfortunately, in its current form, I do not consider that 02-102 meets this test.

The most crucial of these issues from the perspective of the maritime community are:

- 1) The fragmentation, confusion, conflicts and insufficient clarity of current law.
- 2) A precise and explicit definition of regulations pertaining to logkeeping.
- 3) The deficiencies of a Distress and Safety System in which all participants are bitterly aware that the level of DSC false/inadvertent alerts is well in excess of 99% and frequently deal with events in a completely different ocean.

(After 7 years of STCW classes students report a very modest improvement in U.S. waters but in the West Pacific we still encounter or hear reports of days where 20 to 40 alerts will occur.)

THE FRAGMENTATION, CONFUSION, CONFLICTS AND INSUFFICIENT CLARITY OF CURRENT LAW:

One of the greatest difficulties concerning GMDSS is that no new complete regulation or law was provided in Subpart-W from the outset of GMDSS implementation.

The difficulty starts with 80.1065 which states: **"The rules in this subpart are to be read in conjunction with the applicable requirements contained elsewhere in this part; however, in case of conflict, the provisions of this subpart shall govern with respect to the GMDSS".**

This section goes on to say: **"Note: No provision of this subpart is intended to eliminate, or in anyway modify, other requirements contained in this part with respect to part II of title III of the Communications Act."**

This is completely unfair to even the most conscientious person attempting to comply with the regulations. Even experienced officers arrive at differing interpretations of the meaning and intent of the current Part 80 (and ferreting out the various fragments of law is a major burden itself).

Part 80.409 originally covered a wide variety of Radiotelephone stations. Large portions of 80.409 have no application or meaning on a compulsory GMDSS vessel. Many actions, equipment and regulations on a compulsory GMDSS ship are not pertinent to a non-GMDSS vessel – especially DSC procedures.

Part 80.409 should be revised to account for the current state of the law governing non-GMDSS Radiotelephone vessels and all GMDSS regulations should be rewritten and incorporated in Subpart-W where vessel crew can readily locate and examine the entirety of the law that governs a compulsory GMDSS vessel.

If there are duplications or overlaps of the language in both 80.1075 and 80.409 that would be vastly preferable to the current confusion, disagreements and omissions that riddle Part 80.

LOGKEEPING:

Logkeeping procedures under GMDSS flow directly from the current language of 80.1075 which incorporates by reference 80.409 (a) (b) (e). In turn, the contents of the log are largely the result of the typical vessel activities -- composed of Predeparture/Daily checks of the compulsory equipment, routine vessel communications and miscellaneous required entries.

Historically, there was a common understanding of the meaning of these requirements as well as the log requirements for a compulsory telegraph vessel. These have not been proven to be effective as a guide to GMDSS logkeeping. For instance – the current requirements in 80.409 (e)(2)(3) state the log must contain:

(2) A summary of communications conducted on other than VHF frequencies between the ship station and land or mobile stations;

(3) A reference to important service incidents;

This has always been interpreted to mean that any use of the vessel's station transmitters (unless explicitly ruled out by other regulations) results in a logged event.

Inmarsat communications take place on frequencies assigned by the FCC on the vessel's station license and have historically been logged on larger vessels. Are routine Inmarsat transmission required to be logged by all compulsory GMDSS vessels? Yes or no? Furthermore -- the proposed 80.409 does not make clear whether routine priority MF/HF Voice or NBDP/Sitor transmissions are to be logged.

Under GMDSS, the only remaining human watch is on VHF Ch-16. There is much discussion in the industry about whether a VHF log is required but most large vessels maintain a dedicated VHF log for BRM, ISM/ISO or other company/legal purposes. The VHF radio is on machine watch on Ch-70 and the MF/HF DSC Scanning watch receiver is on machine watch covering the six MF/HF DSC frequencies. Distress Inmarsat communications are sent/received by the Inmarsat terminals (provided they are left on). For all practical purposes the GMDSS radios are themselves on watch. Therefore -- the current requirements of 80.409 (e)(5) for human watchstanding signatures are essentially meaningless. Essentially, the machines are on watch last-line to first-line as outlined by 80.409 (e)(6)(7). Such a logkeeping standard ought to be allowed & made explicit for a vessel accounting for the Ch-16 Safety watch in a dedicated VHF log. This would streamline the GMDSS log and reduce the entries required.

An associated issue is that the carriage requirements in 80.1085-80.1093 are driving the watch-keeping status in 80.1123 and the logkeeping requirements of 80.409 and not the reverse. For instance -- can an A3 equipped vessel sail from port in an A1/A2 radio environment with a defective HF DSC or Inmarsat capability -- repairing it at the next port -- as long as it meets GMDSS functional requirements in transit? Is a vessel in a VTS zone relieved of GMDSS watch requirements or is an A3 vessel required to maintain a full A3 HF or Inmarsat high seas watch while transiting from the pilot station to the dock? An A3 vessel (as all U.S. flag vessels have had to be due to no A1/A2 coverage) cannot maintain just an A2 watch on 2187.2 kHz because an MF/HF controller will not allow the de-selection of more than 3 of the 5 HF DSC watch frequencies. Part 80 is silent on such concerns and the Coast Guard's position has always been that if it is bolted to the vessel it must work prior to departure.

What about current conflicts between the VHF watches required for VTS & Bridge-Bridge purposes and the GMDSS Area A-1 watch requirements. What about coming watch conflicts resulting from the rapid implementation of AIS and/or ECDIS systems?

Does 80.409 (f) apply to GMDSS vessels? If so it should be reworked and placed in 80.1075.

On larger, telegraph vessels -- the predeparture test was clearly mandated as performed 1 hour prior to sailing & therefore was done concurrently with the Deck/Engine department predeparture gear tests. This remains the rhythm in many organizations. However, many smaller vessels do not have such extensive predeparture routines -- testing gear 30 minutes or even 15 minutes prior to leaving the dock. If the FCC requires a compulsory GMDSS vessel to perform the predeparture test an hour prior it should state this explicitly.

LOGKEEPING ON A VOYAGE BASIS -- this made sense some decades ago when a single voyage was measured in weeks or months but many vessels complete a voyage in a week and in some cases less than a week. The "pre-voyage" log attestation of the presence of documents/publications -- this should just be assumed by the phrase "required documents and publications" and should not require an additional log entry. Alternatively -- it should just change to a daily entry like the Survival Craft

Equipment and thereby remove the voyage interval issue another way. Likewise the pre-voyage designation of Primary/Secondary operators in 80.1073.

These changes would allow the logkeeper to focus attention on 3 logical categories of events:

- 1) Predeparture/daily tests
- 2) Other routine transmissions and daily activities on the vessel
- 3) Continuous daily certifications as to presence of:
 - a) All required publications & documents aboard. (If necessary)
 - b) Physical presence of the Survival Craft Equipment (SART/EPIRB/SCT).
 - c) Any change in the designation of the primary and secondary operator per current 80.1073

ELECTRONIC LOGKEEPING:

The Commission in its reply to comments on 00-48 indicated it has no prohibition on Electronic Logkeeping. It should simply go the extra step of explicitly allowing vessels to do so.

In the following I offer an example of what I believe 80.1075 should read – incorporating as much of the exact language as the previous CFR

§ 80.1075 GMDSS Station logs.

(a) *General requirements.* Logs must be established and properly maintained as follows:

(1) The log must be kept in an orderly manner. The required information for the particular class or category of station must be readily available.

Key letters or abbreviations may be used if their proper meaning or explanation is contained elsewhere in the same log.

(2) Erasures, obliterations or willful destruction within the retention period are prohibited. Corrections may be made only by the person originating the entry by striking out the error, initialing the correction and indicating the date of correction.

(3) Ship station logs must identify the vessel name, country of registry, and official number of the vessel.

(4) The station licensee and the radio operator in charge of the station are responsible for the maintenance of station logs.

NEW: (5) Station logs may be kept in electronic/computerized form such as a spreadsheet or word processor document. Station logs may be created/maintained on a voyage basis or calendar basis (e.g. Monthly/quarterly), if that better suits the vessel itinerary.

(b) *Availability and retention.* Station logs must be made available to authorized Commission employees upon request and retained as follows:

(1) Logs must be retained by the licensee for a period of two years from the date of entry, and, when applicable, for such additional periods as required by the following paragraphs:

(i) Logs relating to a distress situation or disaster must be retained for three years from the date of entry.

(ii) If the Commission has notified the licensee of an investigation, the related logs must be retained until the licensee

is specifically authorized in writing to destroy them.

(iii) Logs relating to any claim or complaint of which the station licensee has notice must be retained until the claim or complaint has been satisfied or barred by statute limiting the time for filing suits upon such claims.

(2) Logs containing entries required by 80.1075 must be kept at the principal GMDSS station operating location while the vessel is being navigated. All entries in their original form must be retained on board the vessel for at least 30 days from the date of entry (if the Logs are to be sent ashore for the Station Licensee to archive). (If the Logs are retained aboard the vessel then 80.1075 (b) (1) determine the archive interval).

DELETE (c) and (d)?

(e) *Ship GMDSS logs.* Logs of ship stations, which are compulsorily equipped for GMDSS must contain the following applicable log entries and the time of their occurrence:

(1) A summary of all distress, urgency and safety communications that directly involves your own vessel defined as:

(i) Any distress, urgent or safety communications transmitted by your ship station. This shall include all DSC calls, voice or telex transmissions and Inmarsat communications. This summary shall be entered if your own vessel initiates such communications or if your own vessel actually responds or replies to another vessel initiating such communications. Entries of the time of any inadvertent transmissions of distress, urgency and safety signals including the time and method of cancellation shall be made.

(ii) Any distress, urgent or safety MF/HF voice or telex transmissions heard on the follow-on frequencies that the Master determines require a response under the provisions of 80.1115 or 80.1121 should be logged.

(iii) Any distress, urgent or safety communications specifically addressed to your ship station. This shall include all DSC calls, MF/HF voice or telex transmissions and Inmarsat communications. Broadcast EGC communications addressed to all vessels do not have to be logged. Broadcast MF/HF voice or telex transmissions addressed to all vessels do not have to be logged. Broadcast VHF safety transmissions addressed to all vessels do not have to be logged.

(iv) DSC alerts that are Acknowledgments or Relays from other vessels or from Coast Stations do not have to be entered in the log.

(v) DSC Distress alerts from vessels originating an alert shall be logged.

*** SEE NOTE to FOLLOW

(2) A summary of communications conducted on other than VHF frequencies between the ship station and land or mobile stations;

(i) A summary of all routine Voice, MF/HF Sitor/NBDP and Inmarsat transmissions/communications

(3) A reference to important service incidents;

- (i) An entry describing any malfunctioning GMDSS equipment and another entry when the equipment is restored to normal operation.
- (ii) An entry shall be made whenever GMDSS equipment is exchanged or replaced (ensuring that ship MMSI identifiers are properly updated in the replacement equipment), when major repairs to GMDSS equipment are accomplished, and when annual GMDSS inspections are conducted.

DELETE: (4) The position of the ship at least once a day;

DELETE: (5) The name of the operator at the beginning and end of the watch period;

DELETE: (6) The time the watch begins when the vessel leaves port, and the time it ends when the ship reaches port;

DELETE: (7) The time the watch is discontinued, including the reason, and the time the watch is resumed;

NEW: (7) At the beginning of each watch, the Officer of the Navigational Watch, or GMDSS Operator on watch, if one is provided, shall ensure that the navigation receiver is functioning properly and is interconnected to all GMDSS alerting devices which do not have integral navigation receivers, including: VHF DSC, MF DSC, satellite EPIRB and HF DSC or INMARSAT SES. On a ship without integral or directly connected navigation receiver input to GMDSS equipment, the Officer of the Navigational Watch, or GMDSS Operator on watch, shall manually update the position in each equipment. An appropriate log entry of these actions shall be made.

REVISED: (8) The times when storage batteries provided as a part of the required GMDSS installation are placed on full or trickle or automatic charge and taken off full or trickle or automatic charge;

Daily battery charger Voltage and Current readings shall be entered OR Daily battery charger Voltage and Current readings are not required in the log.

(9) Results of required equipment tests, including specific gravity of lead-acid storage batteries and voltage reading of other types of batteries provided as a part of the compulsory installation;

REVISED: (10) Results of inspections and tests performed on the Survival Craft Equipment (EPIRB/SART/SCT).

(11) A daily statement about the condition of the required GMDSS equipment, as determined by either normal communication or test communication;

(12) When the master is notified about improperly operating radiotelephone equipment.

NEW: 13) The EPIRB/SART/SCT units shall be tested monthly. A daily entry shall be made that the Survival Craft Equipment units (EPIRB/SART/SCT) are present and accounted for.

NEW: 14) GMDSS Emergency batteries shall have the specific gravity or voltage readings checked and results recorded on at least a monthly basis. These readings shall be for all cells in the battery.

NEW: 14) All other compulsory equipment shall be checked prior to departure and daily thereafter. If the normal operation of a piece of compulsory equipment is demonstrated by normal communication an additional test event does not have to be generated. Otherwise a test must be made daily and prior to vessel's departure from port.

A typical predeparture or daily test on an A3/A4 vessel should consist of the following:

Navtex: Self test routine or actual reception of messages. (Is this still going to be required to be turned 8 hours prior to departure?)

VHF units: (Self test routine or a call between the two units to the vessel's own MMSI number).

Inmarsat-C: Send test message to own vessel's IMN.

Inmarsat-A: (Test not mandatory due to non-compulsory equipment but 91#/+ test results or daily use entries are optional)

MF/HF DSC: (Self test routines).

MF/HF Voice/Telex: (Self test routine. Test Transceiver into dummy load. However, if available an on-air NBDP exchange with an automated Coast Station or other Mobile station is preferred when combined with a check of voice modulation/meter indications during a tune cycle).

An A1/A2 compulsory equipped vessel shall perform a similar test of the compulsory equipment.

NEW: 15) Initial designation of Primary/Secondary GMDSS operator and any changes in such designation thereafter.

DSC ISSUES:

The national administrations must squarely confront the fact that, even after years of classes, the frequency of false/inadvertent DSC alerts continues to cripple and afflict the GMDSS system – not to mention its very real effect on watchstanding crew.

Imagine yourself working in an office, trying to complete Commission business while a device in the corner randomly and without warning springs to life and emits a loud audible alarm and flashes lights. Some days there is no activity but on others the device interrupts your attention 10, 20 or 30 times per day. How much work would you get done? How would you feel about such an alerting system? The natural human reaction is to disable the device or learn to ignore the alarms ... never actually paying any attention to the details of the DSC call – neither of these outcomes is tolerable when 1 time out of a few thousand, someone's life depends on the proper response to a DSC alert.

Originally the Commission replied to comments on 00-48 that it is not believed "that the proposed amendment will impose a burden on the Bridge Officer that is unreasonable in light of the benefits to be derived from the log keeping requirement."

As one who has personally logged many thousands of DSC calls – the vast majority of them Acknowledgments and Relays (and some that stayed alive for months on end) – I maintain it was an unreasonable burden even in the days of a dedicated Radio Officer on a vessel with 21 crew. It is completely unreasonable for a 5 man crew on a tow vessel.

I understand that the Commission may consider the GMDSS Task Force proposals on this matter, which is heartening, but have offered an example in my 80.1075 notes above. I strongly consider that specific language even if lengthier on such matters is greatly to be preferred to a more general brief clause that is open to interpretation and varying levels of compliance and enforcement.

This single change would cut the log-keeping burden nearly in half. The proportion of DSC Alerts that are now-prohibited ship DSC Relay/Acknowledgments is in excess of 95% in my experience. Eliminating the log requirement for these calls, as well as for Coast Station 00xxxxyyy DSC Relays/Acknowledgments will focus the watchstander's attention on the desired end result – actual SAR communications. Removing one of the most reviled regulations should also enhance compliance.

*****NOTE:**

The interim regulations governing DSC use are designed to ensure that vessels do not use the DSC Acknowledge or Relay feature to pass the particulars of a Distress to another vessel or to shore authorities. Despite this procedure and many years of classes -- the level of false alarms as reported by every class of STCW students continues to be maddening and a considerable distraction from the watchstander's duties regarding safe navigation.

A technological solution of unit replacement or software upgrades would likely cost many millions of dollars and take years to accomplish. The only other solution I can envision is a cooperative effort between national administrations and vessels. A DSC alert from vessels originating a Distress DSC is either genuine Distress traffic (in which case I continue to believe it ought to be logged) or it is maliciously and/or incompetently sent. If such alerts were logged and forwarded to the national administrations then they could be made aware of the extent of the problem and commence warnings and then enforcement actions on the most culpable offenders. This is the only process short of revising the DSC software on every vessel in the world that could assist the maritime community and make GMDSS actually work.

If the national administrations were to return to the duty of receiving log entries some improvement in GMDSS short of the technological might be found. Obviously this would take a significant effort and if it is not within the realm of possibility then the vessels should be relieved of the responsibility of even logging DSC Distress alerts from other vessels. In this case the proposed 80.1075 (1) (v) would not apply.

MISCELLANEOUS:

In paragraph 16 the commission correctly replies to SEA, Inc. that a Restricted GMDSS Operator's license requirement for VHF w/DSC radios would have the effect of re-imposing licensing on non-compulsory vessels. It is, however, frankly close to insanity to allow DSC capable VHF radios to be sold to non-compulsory vessels. Have we learned nothing from the experience of the deluge of false DSC calls emanating from compulsory vessels? Giving the Recreational boating community DSC equipped VHF radios without requiring licensing and training will have the practical effect of destroying A1 GMDSS coverage even before it is implemented in the U.S. Anyone actively sailing or who has experience with the daily traffic on Ch-16 and 2182 kHz at a USCG COMMSTA knows exactly what the result would be -- the destruction of Ch-70 as an effective Distress mechanism -- the level of false alerts will be truly impressive.

The Commission and the Task force need to grapple with this issue before another disaster is allowed to occur. Admittedly the choices are unpalatable -- either the recreational boating community is excluded from GMDSS which is completely undesirable or the equivalent of European ROC training/licensing is instituted in the U.S. for all individuals desiring to outfit their vessels with DSC capable equipment so that deleterious effects on the system all mariners must use will be minimized.

I sincerely hope that the asperity in these comments be overlooked and the suggestions offered seriously considered -- the lives of mariners now depend on a GMDSS system that operates less adequately than it ought to or is capable of -- the least the maritime community deserves is regulation that is clear, direct understandable and grounded in the realities of GMDSS as it actually works aboard ships.

Submitted by:

Kurt Anderson

1218 Lakeview Blvd. E.

Seattle, WA 98102

Phone: 206-325-1968

e-mail: wxwl@juno.com